Service / Boards

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Handling boards

ESD protection

All of the (printed circuit) boards detailed below are equipped with, among other things, large-scale integrated circuits. Voltage surges caused by static charging from persons or objects can easily destroy the circuits.

➠ Mind the following rules to protect your printer against damages caused by electrostatic charge.

- *When handling boards, make sure that you do not endanger the electronic circuits by way of static charging or discharging.*
- *Before opening the printer, place it on a grounded surface.*
- *Earth your body using an ESD bracelet or other suitable means. If no suitable ESD protection is available, touch an earthed object, e.g. a heating radiator, before touching a board.*
- *Only place boards on earthed surfaces.*

Handling

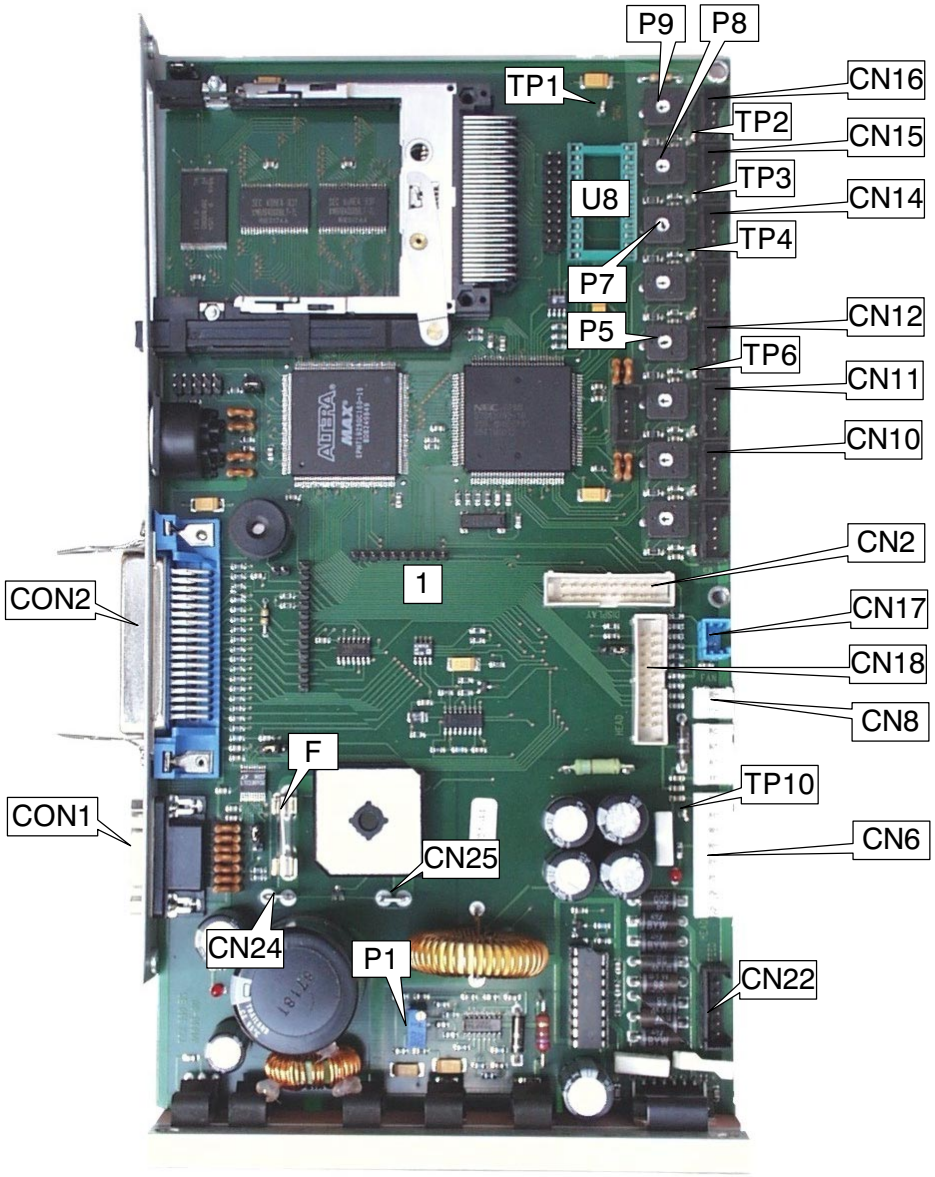
The conducting tracks of state-of-the-art multilayer boards are very thin. Thus, if the board is bent or warped, the conducting tracks can easily crack.

➠ Avoid bending or warping boards.

➠ Avoid the use of excessive force when removing or inserting boards.

CPU board

Layout



ID	Description
1	Printed circuit board TTX 350, ID No.: A0638-xx
CN2	Connection display
CN6	Connection voltage cable print head
CN8	Connection ventilator
CN10	Connection single-start cable
CN11	Connection cutter/stacker
CN12	Connection ribbon sensor
CN14	Connection punch light barrier
CN15	Connection reflex light barrier
CN16	Connection dispenser light barrier
CN17	Connection print-head switch
CN18	Connection data-cable print head
CN22	Connection motor (Use cable no. 97788)
CN24	Connection supply voltage (transformer)
CN25	Connection supply voltage (transformer)

ID	Description
CON1	Serial interface
CON2	Parallel interface
P1	Adjustment pot head voltage
P5	Adjustment pot end-of-ribbon light barrier
P7	Adjustment pot punch light barrier
P8	Adjustment pot reflex light barrier
P9	Adjustment pot dispenser light barrier
TP1	GND
TP2	Test point at P9 dispenser light barrier
TP3	Test point at P8 reflex light barrier
TP4	Test point at P7 punch light barrier
TP6	Test point at P5 end-of-ribbon light barrier
TP10	Test point at P1 head voltage
U8	Base for optional real-time clock
F	Fuse 10AT

Settings

Set sensors as follows:

Sensors

1. Invoke OTHR/SCHK (sensor check) in the parameter menu.
2. Press the CUT or FEED key until the parameter of the sensor to be set appears in the display (Table: Column "Parameter")
3. Adjust the potentiometer (Table: Column "Pot") until the specified value is displayed. The display takes place on the printer display for punch/end-of-material photo switch and reflex photo switch.

   The setting of the dispenser and the end-of-ribbon photo switch is performed using the display of a voltmeter at test point TP2 and TP6, respectively.

➠ The grey cells of the table are used for setting the sensors. The setting is always made when the photoelectric switch is unblocked. The values with the photoelectric switch blocked are for checking purposes.

❍ For more details on the parameter OTHR/SCHK, see the section "Info printouts and parameters".

Sensor	Connector	Setting condition	Pot	Test point	Setting value	Parameter (display)	Value (display)
Punch/end-of-material sensor	CN14	without material (photoelectric switch unblocked)	P7			Pxxx	12
		with backing material					42*
Reflex sensor	CN15	without material (photoelectric switch unblocked); hood closed; Punch/end-of-material sensor disconnected	P8			Rxxx	7
		with material					≥7
		reflex bar					0..9
		white material					10..255
		no photoelectric switch installed					0
End-of-ribbon sensor	CN12	sensor in front of a hole in the clock disc (unblocked)	P5	TP6	0,2V	Fxx	0
		sensor blocked					15
Dispenser sensor	CN16	without material (photoelectric switch unblocked)	P9	TP2	0.20 V	Wxxx	0
		with material					≥50

**) approx. 30 higher than without material.*

❍ Continued on the next page

Head voltage ➔ Set head voltage to the specified voltage using pot P1 (column "Setting value"). Voltage display via voltmeter at TP10.

From firmware version 1.10 on, or from serial no. *022292* 9909-350 on (digits printed in italics =continuous no.), the setting for both printhead versions are identical:

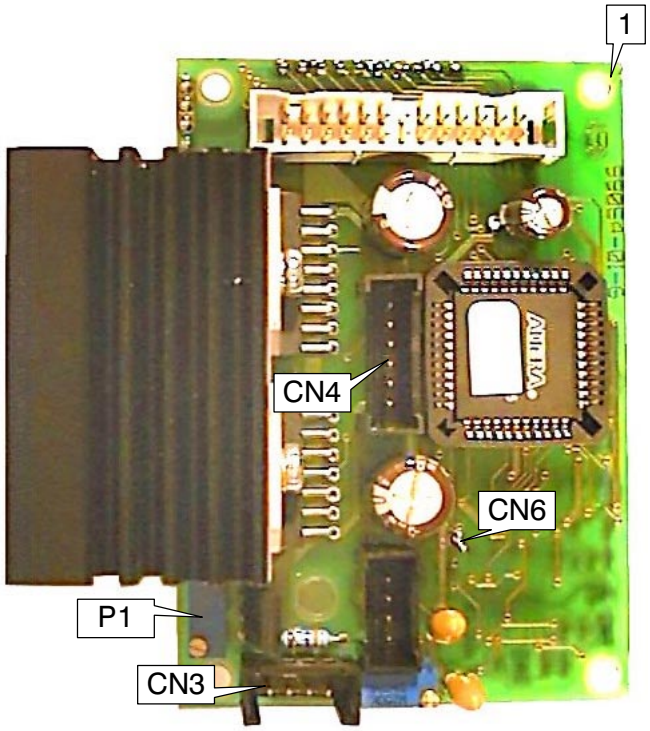
Head voltage	CN18	Printhead	P1	TP10	26,0 V		

Up to firmware version 1.10, the settings for the printheads are different:

Head voltage	CN18	8,0-Dot Printhead	P1	TP10	26,0 V		
		11,8-Dot Printhead			23,5 V		

Printhead voltage setting only in off-line mode! Setting of the printhead voltage while the printer is performing a print job is not possible!

Peripheral board



ID	Description/Function
1	Peripheral board, ID No.: 99054-xx Useable for the options cutter, rewinder and cutter/stacker.
P1	Pot P1 infra-red sensor
CN3	Connection infra-red sensor. (three-core cable to the Sub-D plug) The infra-red sensor is used differently depending on the option used: Cutting stacker and cutter: No setting necessary. Rewinder and infeed: Set potentiometer P1 so that the difference between the two stop points is at a maximum (display). Label-present photoelectric switch: Using potentiometer R41, set a value of 2.5 V (with respect to ground) at test point CN6 (no material in the photoelectric switch and cover closed).
CN4	Connection main driving motor (four-core cable to the Sub-D plug)
CN6	Test point

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